## REMARKS

This Application has been carefully reviewed in light of the Final Office Action mailed April 4, 2006 ("Office Action"). Applicants note with appreciation the Examiner's acceptance of the drawings. At the time of the Office Action, Claims 1-23 were pending in the application and the Examiner rejects Claims 1-23. In this Response to Office Action, Applicants amend Claims 1, 7, 12, and 18. Applicants submit that no new matter has been added with these amendments. Applicants respectfully request reconsideration and favorable action in this case.

### Section 102 Rejections

The Examiner rejects Claim 1 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,345,546 issued to Harada et al. ("*Harada*"). Because *Harada* does not disclose, teach, or suggest each and every feature of Applicants' Claim 1, Applicants respectfully traverse the rejection of Claim 1 and requests reconsideration and favorable action.

Independent Claim 1 recites:

> A method for interfacing with a surface within a computer-aided drawing environment, comprising:
> determining that a plurality of curves operable to define the surface constitute a P x 1 surface condition, a P x 1 surface condition being defined by a number of first curves equal to P and only one second curve, wherein P is an integer greater than zero;
> if an only if it is determined that the plurality of curves constitute a P x 1 surface condition, converting the P x 1 surface condition into an N x M surface condition, an N x M surface condition being defined by a number of third curves equal to N and a number of fourth curves equal to M, wherein N and M are integers greater than one;
> constructing an N x M surface under the N x M surface condition; and
> modifying the N x M surface to edit a drawing.

Thus, Claim 1 recites the following combination of features: 1) determining that a plurality of curves operable to define the surface constitute a P x 1 surface condition and 2) if an only if it is determined that the plurality of curves constitute a P x 1 surface condition, converting the P x 1 surface condition into an N x M surface condition. The claim language clearly

recites determining the existence of a condition (namely, that a plurality of curves constitute a P x 1 surface condition) and performing an additional step if and only if the presence of the condition is determined to be present (namely, converting the P x 1 surface condition into an N x M surface condition). Applicants respectfully submit that, whether considered alone or in combination with any other cited reference, *Harada* does not disclose, either expressly or inherently, the enumerated elements of independent Claim 1.

Generally, *Harada* discloses "a method for generating a fillet surface which smoothly connects two surfaces to each other." (Column 2, lines 31-36). Specifically, the method includes inter alia "designating a spine curve near a boundary between the surfaces" and "generating a Gregory patch which approximately and parametrically represents the filler surface." (Column 21, lines 34-46). The spine curve R (or boundary curve as identified by the Examiner) "is defined with respect to the two surfaces $S_a$ and $S_b$ shown in FIG. 3A." (Column 5, lines 56-57). Thus, the spine curve forms the boundary between two separate surfaces $S_a$ and $S_b$.

*Harada* further discloses that "[t]he two surfaces shown in FIGS. 3A to 3F are respectively defined by parametric surfaces $S_a$ (u, v) and $S_b$ (u, v) having two parameters u and v ($0 \leq u, v \leq 0$)." (Column 5, lines 40-43). Thus, *Harada* only discloses that the two surfaces are each defined by two parameters that are greater than zero. There is no disclosure in *Harada*, however, that either of the parameters, u or v, for either surface $S_a$ or $S_b$ is equal to one or of making a determination as to this fact. Furthermore, the steps described in *Harada* for generating the fillet (described above) are performed regardless of whether either of the parameters, u or v, for either surface $S_a$ or $S_b$ is equal to one. Accordingly, there is no disclosure in *Harada* of "determining that a plurality of curves operable to define the surface constitute a P x 1 surface condition, a P x 1 surface condition being defined by a number of first curves equal to P and only one second curve, wherein P is an integer greater than zero" and "if an only if it is determined that the plurality of curves constitute a P x 1 surface condition, converting the P x 1 surface condition into an N x M surface condition, an N x M surface condition being defined by a number of third curves equal to N and a number of fourth curves equal to M, wherein N and M are integers greater than one," as recited in Applicants' Claim 1.

For at least these reasons, Applicants respectfully request reconsideration and allowance of Claim 1, together with Claims 2-6 that depend from Claim 1.

## Section 103 Rejections

The Examiner rejects Claims 2-23 under 35 U.S.C. § 103(a) as being unpatentable over *Harada* in view of U.S. Patent No. 5,619,625 issued to Konno et al. ("*Konno*").

### A.    The Claims are Allowable over the cited References

Because the proposed *Harada-Konno* combination does not disclose, teach, or suggest each and every feature of Applicant's Claims 2-23, Applicants respectfully traverse the rejection of Claims 2-23 and requests reconsideration and favorable action.

Dependent Claims 2-6 depend from independent Claim 1. These dependent claims are not rendered obvious by the *Harada-Konno* combination proposed by the Examiner because they include the limitations of their respective base claim, which Applicants have shown above to be allowable. Additionally, dependent Claims 2-6, recite features and operations that further distinguish Claims 2-6 from *Harada* and *Konno*. For example, dependent Claim 2 recites that "converting the P x 1 surface condition into an N x M surface condition comprises generating at least one auxiliary curve that is substantially continuous with any adjoining surfaces of a surface having the P x 1 surface condition and compatible with the number of first curves and the only one second curve that define the P x 1 surface condition." In the Office Action, the Examiner acknowledges that *Harada* does not disclose the recited features and operations; rather, the Examiner relies upon the disclosure of *Konno*. (Office Action, page 4). Applicants respectfully submit, however, that *Konno* also does not disclose the features and operations recited in dependent Claim 2.

In fact, *Konno* discloses a surface generation method "which smoothly joins two surface patches sharing a common boundary curve." (Column 2, lines 32-35). Thus, for reasons similar to those discussed above with regard to Claim 1 and *Harada*, Applicants respectfully submit that *Konno* does not disclose, teach, or suggest "converting the P x 1

surface condition into an N x M surface condition . . ." To the contrary, *Konno* specifically discloses "the use of an interpolation method which applies the general boundary Gregory patch, and which generates a free-form surface which is joined smoothly to all the adjacent surfaces by creating the interior control points **for smoothly joining the free-form surface with the adjacent surfaces along all the boundary curves** and by generating the generally boundary Gregory patch based on those interior control points." (Column 2, lines 35-42). Accordingly, the recited features and operations are absent from *Harada*.

Furthermore, there is also no disclosure in *Konno* of "at least one auxiliary curve that is . . . compatible with the number of first curves and the only one second curve that define the P x 1 surface condition," as recited in Claim 2. Although *Konno* discloses "checking G1 continuity at the end points of the boundary curve" and "using the condition of continuity [in calculating the cross boundary derivatives]" (Column 5, lines 23-26 and 41-44), there is no indication in *Konno* that the disclosed "condition of continuity" is analogous to Applicant's recited "auxiliary curve that is . . . compatible with the number of first curves and the only one second curve that define the P x 1 surface condition." In fact, there is no disclosure in *Konno* at all of the meaning of G1 continuity as applied to the end points of the boundary curve. Accordingly, Applicants respectfully submit that to the extent that *Konno* discloses "converting the P x 1 surface condition into an N x M surface condition [by] generating at least on auxiliary curve" as recited in Claim 2 (which Applicants dispute above), there is no further disclosure in *Konno* of "generating at least one auxiliary curve that is . . . compatible with the number of first curves and the only one second curve that define the P x 1 surface condition," as recited in Claim 2.

For at least these reasons, Applicants respectfully request reconsideration and allowance of dependent Claim 2.

Independent Claims 7, 12, and 18 include certain features and operations that are analogous to the features and operations recited in Claims 1 and 2, discussed above. For example, Claim 7 recites "determining that a plurality of curves operable to define the surface constitute a P x 1 surface condition . . . [and] if and only if it is determined that the plurality of curves constitute a P x 1 surface condition, converting the P x 1 surface condition into an

N x M surface condition by generating at least one auxiliary curve that is substantially continuous with any adjoining surfaces of a surface having the P x 1 surface condition and compatible with the number of first curves and the only one second curve that define the P x 1 surface condition, an N x M surface condition being defined by a number of third curves equal to N and a number of fourth curves equal to M, wherein N and M are integers greater than one." As a further example, Claim 12 recites a software program operable to "determine that a plurality of curves operable to define the surface constitute a P x 1 surface condition . . . [and] if and only if it is determined that the plurality of curves constitute a P x 1 surface condition, convert the P x 1 surface condition into an N x M surface condition." Claim 18 recites a computer readable medium comprising a software program operable to "determine that a plurality of curves operable to define the surface constitute a P x 1 surface condition . . . [and] if and only if it is determined that the plurality of curves constitute a P x 1 surface condition, convert the P x 1 surface condition into an N x M surface condition." "a patient drape configured to shield a portion of a patient's body during a medical procedure" and "a fluid collection pouch coupled to the patient drape and having an open end." Accordingly, for reasons analogous to those discussed above with regard to Claims 1 and 2, Applicants submit that the proposed *Harada-Konno* combination does not disclose, teach, or suggest the features of independent Claims 7, 12, and 18.

For at least these reasons, Applicants respectfully request reconsideration and allowance of independent Claims 7, 12, and 18, together with Claims 8-13, 14-17, and 19-23 that depend from Claims 7, 12, and 18, respectively.

### B.    The Proposed *Harada-Konno* Combination is Improper

Furthermore, Applicants respectfully submit that the Examiner has not provided the requisite teaching, suggestion, or motivation, either in the cited references or in the knowledge generally available to one of ordinary skill in the art at the time of Applicant's invention to modify or combine *Harada* with the disclosure of *Konno* in the manner the Examiner proposes. Applicant's claims are allowable for at least this additional reason.

### 1.    The Legal Standard

The question raised under 35 U.S.C. § 103 is whether the prior art taken as a whole would suggest the claimed invention taken as a whole to one of ordinary skill in the art at the time of the invention. Accordingly, even if all elements of a claim are disclosed in various prior art references, which is certainly not the case here as discussed above, the claimed invention taken as a whole cannot be said to be obvious without some reason given in the prior art why one of ordinary skill at the time of the invention would have been prompted to modify the teachings of a reference or combine the teachings of multiple references to arrive at the claimed invention. Applicants respectfully submit that the Examiner has merely pieced together disjointed portions of references, with the benefit of hindsight using Applicant's claims as a blueprint, in an attempt to reconstruct Applicant's claims.

The governing Federal Circuit case law makes this strict legal standard clear.[1] According to the Federal Circuit, "a showing of a suggestion, teaching, or motivation to combine or modify prior art references is an essential component of an obviousness holding." *In re Sang-Su Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430, 1433 (Fed. Cir. 2002) (quoting *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 U.S.P.Q.2d 1456, 1459 (Fed. Cir. 2000)). "Evidence of a suggestion, teaching, or motivation . . . may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, the nature of the problem to be solved." *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). However, the "range of sources available . . . does not diminish the requirement for actual evidence." *Id.* *Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." In re Mills*, 916 F.2d at 682, 16 U.S.P.Q.2d at 1432 (emphasis added). *See also In re Rouffet,* 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-58 (Fed. Cir. 1998) *(holding a prima facie case of obviousness not made where the combination of the references taught every element of the claimed invention but did not provide a motivation to combine)*; *In Re Jones*, 958 F.2d 347, 351, 21 U.S.P.Q.2d 1941, 1944 (Fed. Cir. 1992) ("Conspicuously missing from this record is any evidence, other than the PTO's speculation (if that can be called evidence) that one of

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[1] Note M.P.E.P. 2145 X.C. ("The Federal Circuit has produced a number of decisions overturning obviousness rejections due to a lack of suggestion in the prior art of the desirability of combining references.").

ordinary skill in the herbicidal art would have been motivated to make the modification of the prior art salts necessary to arrive at" the claimed invention.). Even a determination that it would have been obvious to one of ordinary skill in the art at the time of the invention to try the proposed modification or combination is not sufficient to establish a *prima facie* case of obviousness. *See In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1599 (Fed. Cir. 1988).

In addition, the M.P.E.P. and the Federal Circuit repeatedly warn against using an applicant's disclosure as a blueprint to reconstruct the claimed invention. For example, the M.P.E.P. states, "*The tendency to resort to 'hindsight' based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.*" M.P.E.P. § 2142 (emphasis added). The governing Federal Circuit cases are equally clear. "A critical step in analyzing the patentability of claims pursuant to [35 U.S.C. § 103] is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. . . . Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one 'to fall victim to the insidious effect of a hindsight syndrome *wherein that which only the invention taught is used against its teacher.*'" *In re Kotzab,* 217 F.3d 1365, 1369, 55 U.S.P.Q.2d 1313, 1316 (Fed. Cir. 2000) (citations omitted; emphasis added). In *In re Kotzab*, the court noted that to prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. *See id. See also, e.g., Grain Processing Corp. v. American Maize-Products,* 840 F.2d 902, 907, 5 U.S.P.Q.2d 1788, 1792 (Fed. Cir. 1988). Similarly, in *In re Dembiczak*, the Federal Circuit reversed a finding of obviousness by the Board, *explaining that the required evidence of such a teaching, suggestion, or motivation is essential to avoid impermissible hindsight reconstruction of an applicant's invention*:

> Our case law makes clear that the best defense against the subtle but powerful attraction of hind-sight obviousness analysis is *rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.* Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a

blueprint for piecing together the prior art to defeat patentability—the essence
of hindsight.

175 F.3d at 999, 50 U.S.P.Q.2d at 1617 (emphasis added) (citations omitted; emphasis
added).

### 2.     The Analysis

With regard to dependent Claim 2 (and applicable to independent Claims 7, 12, and
18), the Examiner states that "it would have been obvious to one having ordinary skill in the
art at the time the invention was made to modify the method of *Harada et al.* to include
generating at least one auxiliary curve that is substantially continuous with any adjoining
surfaces of a surface having the P x 1 surface condition and compatible with the number of
first curves and the only one second curve . . . thereby providing a free-form surface
generation method." (Office Action, pages 4-5). As motivation for doing so, the Examiner
refers to several advantages purported to be provided by the free-form surface generation
method of *Konno*. (Office Action, page 5). Thus, it appears that the Examiner has merely
proposed alleged advantages for combining *Harada* with *Konno* (advantages which
Applicants do not admit could even be achieved by combining these references in the manner
the Examiner proposes). The Examiner has not pointed to any portions of the cited
references, however, that would teach, suggest, or motivate one of ordinary skill in the art at
the time of invention to incorporate the calculation of cross boundary derivatives on all the
boundary curves forming a face as disclosed in *Konno* with the method for generating a fillet
surface between two surfaces as disclosed in *Harada*. In other words, the alleged advantages
of the systems, as provided by the Examiner, do not provide an explanation as to: (1) why it
would have been obvious to one of ordinary skill in the art at the time of Applicant's
invention (*without using Applicant's claims as a guide*) to modify the particular techniques
disclosed in *Harada* with the cited disclosure in *Konno*; (2) how one of ordinary skill in the
art at the time of Applicant's invention would have actually done so; and (3) how doing so
would purportedly meet the limitations of Applicant's claims in a successful manner. Indeed,
if it were sufficient for Examiners to merely point to a purported advantage of one reference
and conclude that it would have been obvious to combine of modify that reference with other
references simply based on that advantage (which, as should be evident from the case law
discussed above, it certainly is not), then virtually any two or more references would be

combinable just based on the fact the one reference states an advantage of its system. Of course, as the Federal Circuit has made clear and as discussed above, that is not the law.

Accordingly, Applicants respectfully submit that the Examiner's conclusions set forth in the Office Action do not meet the requirements set forth in the M.P.E.P. and the governing Federal Circuit case law for demonstrating a *prima facie* case of obviousness. The Examiner's attempt to modify or combine *Harada* with *Konno* appears to constitute the type of impermissible hindsight reconstruction of Applicant's claims, using Applicant's claims as a blueprint, that is specifically prohibited by the M.P.E.P. and governing Federal Circuit cases. Applicants respectfully submit that the rejection must therefore be withdrawn.

For at least these reasons, Applicants respectfully request that the rejection of the Claims 2-23 be withdrawn and the claims allowed.
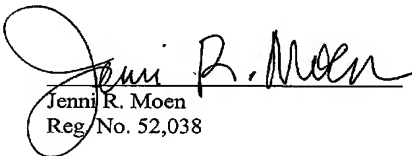
## CONCLUSION

Applicants have made an earnest attempt to place this case in condition for immediate allowance. For the foregoing reasons and for other reasons clear and apparent, Applicants respectfully request reconsideration and allowance of the pending claims.

Although Applicants believe that no fees are due, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of BAKER BOTTS L.L.P.

If there are matters that can be discussed by telephone to advance prosecution of this application, Applicants invite the Examiner to contact its attorney at (214) 953-6809.

Respectfully submitted,

Baker Botts L.L.P.
Attorneys for Applicants

Jenni R. Moen
Reg. No. 52,038

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CORRESPONDENCE ADDRESS:

at Customer No.    **46629**